Fig. B4.5.5.2-1 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections, Carbon Steel AISI 1023-1025
Fig. B4.5.5.2-2 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections AISI Alloy Steel, Normalized, > 0.188 Thick
Fig. B4.5.5.2-3 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections AISI Alloy Steel, Normalized, ≤ 0.188 Thick
Fig. B4.5.5.2-4 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections AISI Alloy Steel, Heat Treated
B4.5.5.2  Low Carbon and Alloy Steels - Minimum Properties

\[ k = \frac{2 \sigma_c}{I} \]

Fig. B4.5.5.2-5 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections AISI Alloy Steel, Heat Treated

- \( F_{tu} = 150,000 \text{ psi} \)
- \( F_{ty} = 132,000 \text{ psi} \)
- \( E = 29 \times 10^6 \text{ psi} \)
- Elongation = 18.5%
Fig. B4.5.5.2-6 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections AISI Alloy Steel, Heat Treated
Fig. B4.5.5.2-7 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections AISI Alloy Steel, Heat Treated
B4.5.6.2  Low Carbon and Alloy Steels—Minimum Properties

Fig. B4.5.6.2-1 Minimum Plastic Bending Curves Carbon Steel
AISI 1023-1025
B4.5.6.2 Low Carbon and Alloy Steels-Minimum Properties

Fig. B4.5.6.2-2 Minimum Plastic Bending Curves Carbon Steel AISI 1023-1025
B4. 5. 6. 2 Low Carbon and Alloy Steels—Minimum Properties

Fig. B4. 5. 6. 2-3 Minimum Plastic Bending Curves AISI Alloy Steel,Normalized, > 0.188 In. Thick

\( F_{tu} = 90,000 \text{ psi} \)
\( F_{ty} = 70,000 \text{ psi} \)
\( E_C = 29.0 \times 10^6 \text{ psi} \)
Elongation = 23%
B4.5.6.2 Low Carbon and Alloy Steels—Minimum Properties

Room Temperature

\[ F_b \text{ (ksi)} \]

150
100
50
0

\[ \epsilon \text{ (inches/inch)} \]

0.02 0.04 0.06 0.08 0.10 0.12 0.14 0.16

\( k = 2.0 \)
\( k = 1.7 \)
\( k = 1.5 \)
\( k = 1.25 \)
\( k = 1.0 \)

Stress-Strain Curve

\( F_{tu} = 90,000 \text{ psi} \)
\( F_{ty} = 70,000 \text{ psi} \)
\( E_C = 29.0 \times 10^6 \text{ psi} \)
Elongation = 23%

Fig. B4.5.6.2-4 Minimum Plastic Bending Curves AISI Alloy Steel, Normalized, Thickness > 0.188 In.
B4.5.6.2 Low Carbon and Alloy Steels-Minimum Properties

Fig. B4.5.6.2-5 Minimum Plastic Bending Curves AISI Alloy Steel, Normalized, Thickness ≤ 0.188 In.
Fig. B4.5.6.2-6 Minimum Plastic Bending Curves AISI Alloy Steel, Normalized, Thickness ≤ 0.188 In.
B4.5.6.2 Low Carbon and Alloy Steels—Minimum Properties

\[ F_{tu} = 125,000 \text{ psi} \]
\[ F_{ty} = 103,000 \text{ psi} \]
\[ E = 29.0 \times 10^6 \text{ psi} \]
Elongation = 23%

Fig. B4.5.6.2-7 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated
Fig. B4.5.6.2-8 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated
Graph to be furnished when available
B4.5.6.2  Low Carbon and Alloy Steels-Minimum Properties

Room Temperature

Stress-Strain Curve

$F_b$ (ksi)

$k = 2.0$

$k = 1.7$

$k = 1.5$

$k = 1.25$

$k = 1.0$

$F_{tu} = 150,000$ psi

$F_{ty} = 132,000$ psi

$E = 29 \times 10^6$ psi

Elongation = 18.5%

Fig. B4.5.6.2-10 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated
B4.5.6.2 Low Carbon and Alloy Steels-Minimum Properties

Fig. B4.5.6.2-11 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated
B4.5.6.2 Low Carbon and Alloy Steels—Minimum Properties

Fig. B4.5.6.2-12 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated

$F_{tu} = 180,000 \text{ psi}$

$F_{ty} = 163,000 \text{ psi}$

$E = 29 \times 10^6 \text{ psi}$

Elongation = 15.0%
B4.5.6.2 Low Carbon and Alloy Steels—Minimum Properties

Room Temperature

$F_{tu} = 200,000$ psi

$F_{ty} = 176,000$ psi

$E = 29.0 \times 10^6$ psi

Elongation = 13.5%

$F_y$ Curve

$F_p$ (ksi)

$\epsilon$ (inches/inch)

Fig. B4.5.6.2-13 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated
Fig. B4.5.6.2-14 Minimum Plastic Bending Curves AISI Alloy Steel, Heat Treated

\[ F_{tu} = 200,000 \text{ psi} \]
\[ F_{ty} = 176,000 \text{ psi} \]
\[ E_C = 29.0 \times 10^6 \text{ psi} \]
Elongation in tension = 13.5%
Fig. B4.5.5.3-1 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections A-286 Alloy, Heat Treated
B4.5.5.3 Heat Resistant Alloys—Minimum Properties

\[ k = \frac{2Qc}{I} \]

**Fig. B4.5.5.3-2** Minimum Bending Modulus of Rupture Curves for Symmetrical Sections Age Hardened, K-Monel Alloy Sheet
Fig. B4.5.5.3-3 Minimum Bending Modulus of Rupture Curves for Symmetrical Sections Monel Alloy-Cold Rolled, Annealed Sheet
Graph to be furnished when available
Corrosion Resistant Metals - Minimum Properties

Fig. B4.5.6.3-1 Minimum Plastic Bending Curves A-286 Alloy, Heat Treated
Graph to be furnished when available
Graph to be furnished when available
B4.5.6.3 Corrosion Resistant Metals-Minimum Properties

Fig. B4.5.6.3-4 Minimum Plastic Bending Curves for Age Hardened K-Monel Alloy Sheet
B4. 5. 6. 3 Corrosion Resistant Metals—Minimum Properties

![Stress-Strain Curve]

- $F_{tu} = 70,000$ psi
- $F_{ty} = 28,000$ psi
- $E = 26 \times 10^6$ psi
- Elongation = 35%

Fig. B4. 5. 6. 3-5 Minimum Plastic Bending Curves Monel Alloy
Cold Rolled, Annealed Sheet
Fig. B4.5.6.3-6 Minimum Plastic Bending Curves Monel Alloy
Cold Rolled, Annealed Sheet